Response planning and capacity enhancement of veterinary services for controlling and mitigating the impact of Rift Valley fever outbreaks in East Africa: ILRI outcome story 2008

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Rift Valley fever is an epidemic disease in East Africa, with outbreaks approximately every 10 years. During the last outbreak, in late 2006 and early 2007, more than 300 people died in Kenya, Tanzania and Somalia and local and regional livestock trade and associated livelihoods were severely disrupted. Broad-level prediction of the potential for an outbreak based on satellite-image indicators of rainfall linked to vector population increases can help to alert veterinary services. However, despite predictions of increased disease risk, investments in Rift Valley fever risk mitigation measures and improving targeting and decisions about implementing strategies are needed to improve the capacity of veterinary and health service to respond.

The output milestone for the research leading to this outcome was included in the 2005-7 MTP under the Biotechnology Theme. The milestone reads – "*Strategic, technical and laboratory support provided for regional vector-borne disease control programmes."* Given the urgency of response as livestock and human deaths were mounting in late 2006 and early 2007, ILRI engaged in 3 major research activities to support Rift Valley fever risk mitigation in Kenya and Tanzania. The first research output was to provide detailed data and analysis on the socio-economic impacts of the disease and describe its effects on local and regional livestock markets. These outputs were to inform senior decision makers as to the impacts of the disease and the need for greater and more timely investments in veterinary and human health response capacity to mitigate Rift Valley fever risk (Rich and Wanyoike 2007, Wanyoike and Rich 2007 – Attachments 1&2). The second research output was to assess the response capacity of different veterinary and health institutions and how the costs of response compared to the losses incurred (Schelling and Kimani 2007 – Attachment 3; ILRI report to USAID 2007). These two intermediate outputs were then integrated by ILRI and FAO regional staff into a decision support tool (Attachment 4-FAO/ILRI 2008).

While ILRI research outputs were used to inform actions by veterinary services in Kenya and Tanzania, they are best documented in Kenya. The Kenyan Veterinary Department prepared a contingency plan for Rift Valley fever. The document states that "*The plan has been adapted from the FAO/ILRI decision-support tools (2008)."* There are also a number of elements in the plan that reflect key findings from ILRI-DVS research studies, particularly that:

1. International early warning systems based on satellite imagery need to be supplemented with local systems based on disease surveillance by pastoralists who are well able to identify livestock outbreaks early.

2. Vaccines need to be combined with other measures.

3. Communication with all stakeholders and between the veterinary and health sectors is vital.

A copy of the Government of Kenya Contingency Plan for Rift Valley fever is attached (Attachment 5). In late 2008, after the Kenyan plan was approved, an increased risk of Rift Valley fever outbreaks based on satellite-indicators was noted through the FAO EMPRES early-warning system. The Kenyan Veterinary Department convened a series of meetings to apply their contingency planning document (Attachment 6attached). Fortunately, conditions for an outbreak became less favourable by late October.

Tools that look at locally adaptable solutions to enhance response capacity of veterinary and human health departments to epidemic zoonotic diseases are needed across the developing world. ILRI was able to link with FAO so

that the decision support tool and its underlying research inputs can be made widely available and adapted to other country and epidemic disease situations.

Evidence provided to the CGIAR:

Attachment 1: Rich & Wanyoike 2007

Attachment 2: Wanyoike and Rich 2007

Attachment 3: Schelling and Kimani 2007

Attachment 4: FAO/ILRI decision support tool

Attachment 5: Kenya contingency plan

Attachment 6: Kenya contingency plan implementation

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